AMENDMENTS TO THE CLAIMS

1.   (Currently Amended) A method of ~~providing sensor data analysis~~ equipping and training ~~licensed operators to perform sensor data acquisition at remote locations using a smart data system~~ comprising ~~at least one of the steps of~~:

~~a) charging a licensed operator a one-time setup fee to obtain a license to provide sensor data acquisition services and to obtain training;~~

~~b) charging the licensed operator an ongoing subscription fee for access to and use of a smart data analysis system for transmission of data and data warehousing services; and~~

~~c) charging the licensed operator an individual project fee, wherein said individual project fee varies according to the amount of analytics, display, and customer deliverables required~~

a) receiving environmental subsurface data at a first computer from a first entity, wherein said environmental subsurface data is acquired at a location via moveable direct reading sensors, wherein said environmental subsurface comprises an area beneath at least one of a surface of earth, or a surface of a body of water, and wherein said moveable direct reading sensors are placed in said environmental subsurface and said moveable direct reading sensors are in direct contact with at least one of soil, water, or vapor;

b) analyzing said environmental subsurface data via a data analysis system to obtain information about said subsurface data, wherein said data analysis system comprises at least one of said first or a second computer; and

c) providing said information to a second entity via said first or second computers or a third computer, wherein the second entity is the same or different than the first entity.

2.   (Currently Amended) The method according to claim 1, wherein at least one of said receiving step a) or said providing step c) ~~transmission~~ of said data of said step (b) comprises: receiving or transmitting said data or information via a ~~software~~ communications link to a Web site.

3.   (Currently Amended) The method according to claim 1, wherein said ~~smart data analysis~~ analyzing~~of said~~ step (b) comprises:

~~using computing~~ational ~~software comprising~~ at least one of: a two dimensional (2D) visualization ~~and~~ or a three dimensional (3D) visualization of geo-referenced direct reading sensor data.

4.   (Currently Amended) The method according to claim 1, wherein said ~~smart data analysis of said~~ analyzing step ~~(~~b~~)~~ comprises:

        aggregating said data into a comparative database, and obtaining ~~providing the user with~~ a relative analysis of various sites based on at least one of geological or ~~and~~ contaminant conditions.

5.   (Currently Amended) The method according to claim 1, wherein said analyzing step b) further comprises a data warehousing service ~~s of said step (b)~~ comprising ~~es~~:

        posting or ~~and~~ delivering to a web site at least one of: an interactive two-dimensional visualization; an interactive three-dimensional visualization; or ~~and~~ engineering design data ~~; to a Web site~~.

6.   (Currently Amended) The method according to claim 1, wherein said providing step ~~(~~c~~)~~ further comprises:

        delivery of at least one of software or ~~and~~ paper deliverables related to said data ~~for each of said projects~~ to at least one of: ~~the~~ a licensed operator; a licensed client; ~~and~~ or an other clients with licensed access.

7.   (Currently Amended) The method ~~according to~~ of claim 1, further comprising ~~wherein said data comprises environmental data, and wherein said sensor data acquisition services comprise~~:

~~a) acquiring environmental subsurface data via direct reading sensors~~

        ~~b)~~d) geo-referencing said environmental subsurface data; and

        ~~c)~~e) using said information to select a next location for acquiring a next environmental subsurface data from said moveable direct reading sensors ~~transmitting said data to a data analysis application server; and~~

        ~~analyzing said data to obtain information about said data.~~

8.   (Currently amended) The method of claim [[7]] 1, wherein said data ~~of step (a)~~ comprises: one or more data parameters.

9.   (Currently Amended) The method of claim [[7]] 1, wherein said environmental subsurface data relates to at least one of chemical or~~and~~ geological attributes of the subsurface.

10.   (Currently Amended) The method of claim [[7]] 1, wherein said moveable direct reading sensors of step (a) comprise at least one of:

      direct sensing technologies;

      optical sensors;

      chemical sensors;

      electromechanical sensors;

      membrane interface probe (MIP) sensors;

      advanced MIP sensors;

      laser induced fluorescence (LIF) sensors;

      ultraviolet induced fluorescence (UVF) sensors;

      polymer sensors; ~~and~~or

      haloprobe sensors.

11.   (Currently Amended) The method of claim 7, wherein said geo-referencing of said step (~~b~~d) comprises at least one of:

      geo-referencing in at least two dimensions; ~~and~~or

      geo-referencing said data to a specific point on the earth's surface.

12.   (Currently Amended) The method of claim 11, wherein said at least two dimensions comprise at least one of:

latitude, longitude, altitude, or~~and~~ time.

13.   (Currently Amended) The method of claim 7, wherein said geo-referencing of said step ~~(b~~d) comprises:

geo-referencing in at least three dimensions.

14.   (Currently Amended) The method of claim 13, wherein said at least three dimensions comprise at least one of: latitude, longitude, altitude, ~~and~~ or time.

15.   (Currently Amended) The method of claim [[7]] 1, wherein said ~~transmitting~~providing ~~of step (c)~~ comprises at least one of:

transmitting via the Internet;

transmitting via a communications link;

transmitting via a wired communications link; or~~and~~

transmitting via a wireless communications link.

16.   (Currently Amended) The method of claim [[7]] 1, wherein said ~~application server~~ providing of step ~~(c)~~ comprises an application server, wherein the application server comprises at least one of:

an application service provider (ASP); or

a software as a service.

17.   (Currently Amended) The method of claim [[7]] 1, wherein said analyzing step ~~(d~~b) comprises at least one of:

storing said environmental subsurface data in a database;

mining said environmental subsurface data;

calculating said information from said environmental subsurface data using an algorithm;

performing visualization processing of said environmental subsurface in at least two dimensions;

displaying a graphical visualization of said data;

mapping said environmental subsurface data; and or

displaying said environmental subsurface data in at least one of: two-dimensional (2D) and

or three-dimensional (3D) formats said data.

18.   (Currently Amended) The method of claim [[7]] 1, wherein said analyzing step (d b)

comprises at least one of:

refining raw environmental subsurface data into processed environmental subsurface data;

normalizing said environmental subsurface data for variations in acquisition of said data;

normalizing for a condition of a membrane of a membrane interface probe (MIP);

normalizing for variation of actual subsurface conditions including at least one of chemical

concentration and or soil water matrix;

determining relative quality efficacy data including determining at least one of: pressure,

flow rate, condition of detectors, drift, calibration, depth of probe, hydrostatic, and or baseline noise

of analytical/electrical system;

storing said environmental subsurface data;

aggregating said environmental subsurface data into aggregate environmental subsurface

data;

determining predictive modeling using said aggregate environmental subsurface data;

assessing measure of risk using said aggregate environmental subsurface data;

evaluating risk using said aggregate environmental subsurface data;

calculating total mass of chemical compounds;

calculating volume of affected soil and groundwater;

calculating compound identification[[,]];

calculating removal costs[[,]];

performing sensitivity analysis[[,]]; and or

comparing data of multiple sites.

19.   (Currently amended)) The method of claim 18, wherein said step of performing a sensitivity analysis comprises at least one of:

    displaying using a "dashboard" type display; ~~and~~or

    providing results to at least one of an office device~~, and~~ or a field device.

20.   (Currently Amended) The method of claim [[7]] 1, further comprising:

    ~~c~~d) posting said information on a web site for access by authorized users.

21.   (Original) The method of claim 20, wherein said web site comprises:

a secure Internet Web site.

22.   (Currently Amended) The method of claim [[7]] 1, further comprising at least one of:

    ~~c~~d) transmitting said information over a network to a mobile device, or

transmitting said information over a network to an office device.

23.   (Original) The method of claim 22, wherein said network comprises:

a wireless network.

24.   (Currently Amended) The method of claim [[7]] 1, further comprising at least one of:

    ~~c~~d)   aggregating said environmental subsurface data into an aggregate database;

    ~~f~~e)   mining said aggregate database;

    ~~g~~f)   determining predictive modeling using said aggregate database;

    ~~h~~g)   assessing measure of risk using said aggregate database;

    ~~i~~h)   evaluating risk using said aggregate database;

    ~~j~~i)   providing the user with relative analysis of various sites based on at least one of:

        geological information~~,~~ ~~and~~ or contaminant conditions; ~~and~~

    ~~k)   storing said data in a database;~~

    ~~l~~j)   grooming said environmental subsurface data;

m)k)   comparing said environmental subsurface data to at least one of: historical

environmental subsurface data, and or environmental subsurface data from other sites;

n)l)   performing datamining; andor

o)m)   ranking sites.

25. (Currently Amended) The method of claim [[7]] 1, further comprising:

c d)   transmitting said information comprising:

i. transmitting said information including completed data analytics via the

Internet back to source location for decision-making and process changes; and

ii. transmitting said information wirelessly to a mobile device to facilitate

access via Internet protocols to said information analyzed from said sensor outputs.

26. (Currently Amended) The method of claim [[7]] 1, further comprising at least one of:

d)   normalizing said environmental subsurface data for variations in at least one of:

acquisition of said environmental subsurface data, condition of membrane of a membrane interface

probe (MIP), subsurface conditions including at least one of chemical concentration and or soil

water matrix; andor

f)e)   determining relative quality efficacy data including determining at least one of:

pressure, flow rate, condition of detectors, drift, calibration, depth of probe, hydrostatic, and or

baseline noise of analytical/electrical system.

27.   (New) The method of claim 1, wherein steps a) – c) are performed by a licensor and

wherein the first entity is a licensed operator and the second entity is a licensed client.

28.   (New) A method of providing data for analysis comprising:

a)   gathering environmental subsurface data at a first computer, wherein said

environmental subsurface data is gathered at a location via moveable direct reading sensors,

wherein said environmental subsurface comprises an area beneath at least one of a surface of earth,

and/or a surface of a body of water, and wherein said moveable direct reading sensors are placed in said environmental subsurface and said moveable direct reading sensors are in direct contact with at least one of soil, water, and/or vapor;

b) providing said environmental subsurface data to a first entity for analysis of said environmental subsurface data via a data analysis system to obtain information about said subsurface data, wherein said data analysis system comprises at least one of said first or a second computer; and

c) receiving instructions from a second entity based on said information via said first or second computers or a third computer.

29. (New) The method according to claim 28, wherein at least one of said providing step b) or said receiving step c) comprises:
receiving or transmitting said data or information via a communications link to a Web site.

30. (New) The method according to claim 28, wherein said analysis of said providing step b) comprises:
at least one of: a two dimensional (2D) visualization or a three dimensional (3D) visualization of geo-referenced direct reading sensor data.

31. (New) The method according to claim 28, wherein said analysis of said providing step b) comprises:
aggregating said data into a comparative database, and obtaining a relative analysis of various sites based on at least one of geological or contaminant conditions.

32. (New) The method according to claim 28, wherein said analysis of said providing step b) further comprises a data warehousing service comprising:
posting or delivering to a web site at least one of: an interactive two-dimensional visualization; an interactive three-dimensional visualization; or engineering design data.

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33.   (New) The method according to claim 28, wherein said receiving step c) further comprises: delivery of at least one of software or paper deliverables related to said data from at least one of: a licensed client; a licensor; or an other client with licensed access.

34.   (New) The method of claim 28, further comprising:

      d)   geo-referencing said environmental subsurface data; and

      e)   using said information to select a next location for acquiring a next environmental subsurface data from said moveable direct reading sensors .

35.   (New) The method of claim 28, wherein said data comprises:

      one or more data parameters.

36.   (New) The method of claim 28, wherein said environmental subsurface data relates to at least one of chemical or geological attributes of the subsurface.

37.   (New) The method of claim 28, wherein said moveable direct reading sensors of step (a) comprise at least one of:

      direct sensing technologies;

      optical sensors;

      chemical sensors;

      electromechanical sensors;

      membrane interface probe (MIP) sensors;

      advanced MIP sensors;

      laser induced fluorescence (LIF) sensors;

      ultraviolet induced fluorescence (UVF) sensors;

      polymer sensors; or

      haloprobe sensors.

38.   (New) The method of claim 34, wherein said geo-referencing of said step (b) comprises at least one of:

      geo-referencing in at least two dimensions; or

      geo-referencing said data to a specific point on the earth's surface.

39.   (New) The method of claim 38, wherein said at least two dimensions comprise at least one of:

      latitude, longitude, altitude, or time.

40.   (New) The method of claim 34, wherein said geo-referencing of said step (b) comprises:

      geo-referencing in at least three dimensions.

41.   (New) The method of claim 40, wherein said at least three dimensions comprise at least one of: latitude, longitude, altitude, or time.

42.   (New) The method of claim 28, wherein said providing of step b) comprises at least one of:

      transmitting via the Internet;

      transmitting via a communications link;

      transmitting via a wired communications link; or

      transmitting via a wireless communications link.

43.   (New) The method of claim 28, wherein said providing of step b) comprises an application server, wherein the application server comprises at least one of:

      an application service provider (ASP); or

      a software as a service.

44.   (New) The method of claim 28, wherein said analysis of said providing step b) comprises at least one of:

storing said environmental subsurface data in a database;

mining said environmental subsurface data;

calculating said information from said environmental subsurface data using an algorithm;

performing visualization processing of said environmental subsurface in at least two dimensions;

displaying a graphical visualization of said data;

mapping said environmental subsurface data; or

displaying said environmental subsurface data in at least one of: two-dimensional (2D) or three-dimensional (3D) formats.

45.   (New) The method of claim 28, wherein said analysis of said providing step b) comprises at least one of:

refining raw environmental subsurface data into processed environmental subsurface data;

normalizing said environmental subsurface data for variations in acquisition of said data;

normalizing for a condition of a membrane of a membrane interface probe (MIP);

normalizing for variation of actual subsurface conditions including at least one of chemical concentration or soil water matrix;

determining relative quality efficacy data including determining at least one of: pressure, flow rate, condition of detectors, drift, calibration, depth of probe, hydrostatic, or baseline noise of analytical/electrical system;

storing said environmental subsurface data;

aggregating said environmental subsurface data into aggregate environmental subsurface data;

determining predictive modeling using said aggregate environmental subsurface data;

assessing measure of risk using said aggregate environmental subsurface data;

evaluating risk using said aggregate environmental subsurface data;

calculating total mass of chemical compounds;

calculating volume of affected soil and groundwater;

calculating compound identification;

calculating removal costs;

performing sensitivity analysis; or

comparing data of multiple sites.

46.   (New) The method of claim 45, wherein said step of performing a sensitivity analysis
comprises at least one of:

displaying using a "dashboard" type display; or

providing results to at least one of an office device or a field device.

47.   (New) The method of claim 28, further comprising:

d) posting said information on a web site for access by authorized users.

48.   (New) The method of claim 47, wherein said web site comprises:

a secure Internet Web site.

49.   (New) The method of claim 28, further comprising at least one of:

d) transmitting said information over a network to a mobile device, or transmitting said
information over a network to an office device.

50.   (New) The method of claim 49, wherein said network comprises:

a wireless network.

51.   (New) The method of claim 28, further comprising at least one of:

d)   aggregating said environmental subsurface data into an aggregate database;

e)   mining said aggregate database;

f)   determining predictive modeling using said aggregate database;

g)   assessing measure of risk using said aggregate database;

h)   evaluating risk using said aggregate database;

i)   providing the user with relative analysis of various sites based on at least one of:

geological information or contaminant conditions;

j)   grooming said environmental subsurface data;

k)   comparing said environmental subsurface data to at least one of: historical

environmental subsurface data or environmental subsurface data from other sites;

l)   performing datamining; or

m)   ranking sites.

52. (New) The method of claim 28, further comprising:

d)   transmitting said information comprising:

transmitting said information including completed data analytics via the Internet back to

source location for decision-making and process changes; and

transmitting said information wirelessly to a mobile device to facilitate access via Internet

protocols to said information analyzed from said sensor outputs.

53.   (New) The method of claim 28, further comprising at least one of:

d)   normalizing said environmental subsurface data for variations in at least one of:

acquisition of said environmental subsurface data, condition of membrane of a membrane interface

probe (MIP), subsurface conditions including at least one of chemical concentration or soil water

matrix; or

e)   determining relative quality efficacy data including determining at least one of:

pressure, flow rate, condition of detectors, drift, calibration, depth of probe, hydrostatic, or baseline

noise of analytical/electrical system.

54.   (New)   The method of claim 28, wherein steps a) – c) are performed by a licensed operator and wherein the first entity is a licensor and the second entity is a licensed client.

55.   (New)   A method of managing the acquisition of data comprising:

a) receiving information, from a first entity, regarding gathered and analyzed environmental subsurface data at a first computer by a second entity,

wherein said environmental subsurface comprises an area beneath at least one of a surface of earth, or a surface of a body of water,

wherein said moveable direct reading sensors are placed in said environmental subsurface and said moveable direct reading sensors are in direct contact with at least one of soil, water, or vapor,

wherein said environmental subsurface data is gathered at a location by a second entity via moveable direct reading sensors, and

wherein the environmental subsurface data is transmitted by the second entity, via a second computer, to the first entity for analysis of said environmental subsurface data via a data analysis system to obtain information about said subsurface data.

56.   (New)   The method according to claim 55, further comprising:

b) providing said second entity with instructions based on said information.

57.   (New)   The method according to claim 56, wherein at least one of said receiving step a) or said providing step b) comprises:

receiving or transmitting said data or information via a communications link to a Web site.

58.   (New)   The method according to claim 55, wherein said analysis comprises:

at least one of: a two dimensional (2D) visualization or a three dimensional (3D) visualization of geo-referenced direct reading sensor data.

59.   (New) The method according to claim 55, wherein said analysis comprises:

aggregating said data into a comparative database, and obtaining a relative analysis of various sites based on at least one of geological or contaminant conditions.

60.   (New) The method according to claim 55, wherein said analysis further comprises a data warehousing service comprising:

posting or delivering to a web site at least one of: an interactive two-dimensional visualization; an interactive three-dimensional visualization; or engineering design data.

61.   (New) The method according to claim 56, wherein said providing step b) further comprises:

delivery of at least one of software or paper deliverables related to said data to at least one of: a licensor, a licensed operator; or an other client with licensed access.

62.   (New) The method of claim 56, further comprising:

c) geo-referencing said environmental subsurface data; and

d) using said information to select a next location for acquiring a next environmental subsurface data from said moveable direct reading sensors .

63.   (New) The method of claim 55, wherein said data comprises:

one or more data parameters.

64.   (New) The method of claim 55, wherein said environmental subsurface data relates to at least one of chemical or geological attributes of the subsurface.

65.   (New) The method of claim 55, wherein said moveable direct reading sensors of step (a) comprise at least one of:

direct sensing technologies;

optical sensors;

chemical sensors;

electromechanical sensors;

membrane interface probe (MIP) sensors;

advanced MIP sensors;

laser induced fluorescence (LIF) sensors;

ultraviolet induced fluorescence (UVF) sensors;

polymer sensors; or

haloprobe sensors.

66.   (New) The method of claim 62 wherein said geo-referencing of said step (c) comprises at
least one of:

        geo-referencing in at least two dimensions; or

        geo-referencing said data to a specific point on the earth's surface.

67.   (New) The method of claim 66, wherein said at least two dimensions comprise at least one
of:

        latitude, longitude, altitude, or time.

68.   (New) The method of claim 62, wherein said geo-referencing of said step (c) comprises:

        geo-referencing in at least three dimensions.

69.   (New) The method of claim 68, wherein said at least three dimensions comprise at least one
of: latitude, longitude, altitude, or time.

70.   (New) The method of claim 56, wherein said receiving, transmitting, and providing
comprise at least one of:

        transmitting via the Internet;

        transmitting via a communications link;

transmitting via a wired communications link; or

transmitting via a wireless communications link.

71.   (New) The method of claim 55, wherein said receiving of step a) comprises an application

server, wherein the application server comprises at least one of:

an application service provider (ASP); or

a software as a service.

72.   (New) The method of claim 55, wherein said analysis comprises at least one of:

storing said environmental subsurface data in a database;

mining said environmental subsurface data;

calculating said information from said environmental subsurface data using an algorithm;

performing visualization processing of said environmental subsurface in at least two

dimensions; displaying a graphical visualization of said data;

mapping said environmental subsurface data; or

displaying said environmental subsurface data in at least one of: two-dimensional (2D) or

three-dimensional (3D) formats.

73.   (New) The method of claim 55, wherein said analysis comprises at least one of:

refining raw environmental subsurface data into processed environmental subsurface data;

normalizing said environmental subsurface data for variations in acquisition of said data;

normalizing for a condition of a membrane of a membrane interface probe (MIP);

normalizing for variation of actual subsurface conditions including at least one of chemical

concentration or soil water matrix;

determining relative quality efficacy data including determining at least one of: pressure,

flow rate, condition of detectors, drift, calibration, depth of probe, hydrostatic, or baseline noise of

analytical/electrical system;

storing said environmental subsurface data;

aggregating said environmental subsurface data into aggregate environmental subsurface data;

determining predictive modeling using said aggregate environmental subsurface data;

assessing measure of risk using said aggregate environmental subsurface data;

evaluating risk using said aggregate environmental subsurface data;

calculating total mass of chemical compounds;

calculating volume of affected soil and groundwater;

calculating compound identification;

calculating removal costs;

performing sensitivity analysis; or

comparing data of multiple sites.

74.   (New) The method of claim 73, wherein said step of performing a sensitivity analysis comprises at least one of:

displaying using a "dashboard" type display; or

providing results to at least one of an office device or a field device.

75.   (New) The method of claim 56, further comprising:

c) posting said information on a web site for access by authorized users.

76.   (New) The method of claim 55, wherein said web site comprises:
a secure Internet Web site.

77.   (New) The method of claim 56, further comprising at least one of:

c) transmitting said information over a network to a mobile device, or
transmitting said information over a network to an office device.

78.   (New) The method of claim 77, wherein said network comprises:

a wireless network.

79.   (New) The method of claim 56, further comprising at least one of:

    c)   aggregating said environmental subsurface data into an aggregate database;

    d)   mining said aggregate database;

    e)   determining predictive modeling using said aggregate database;

    f)   assessing measure of risk using said aggregate database;

    g)   evaluating risk using said aggregate database;

    h)   providing the user with relative analysis of various sites based on at least one of:

geological information or contaminant conditions;

    i)   grooming said environmental subsurface data

    j)   comparing said environmental subsurface data to at least one of: historical

environmental subsurface data or environmental subsurface data from other sites;

    k)   performing datamining; or

    l)   ranking sites.

80. (New) The method of claim 56, further comprising:

    c)   transmitting said information comprising:

    transmitting said information including completed data analytics via the Internet

back to source location for decision-making and process changes; and

    transmitting said information wirelessly to a mobile device to facilitate access via

Internet protocols to said information analyzed from said sensor outputs.

81.   (New) The method of claim 56, further comprising at least one of:

    c)   normalizing said environmental subsurface data for variations in at least one of:

acquisition of said environmental subsurface data, condition of membrane of a membrane interface

probe (MIP), subsurface conditions including at least one of chemical concentration or soil water

matrix; or

d)   determining relative quality efficacy data including determining at least one of: pressure, flow rate, condition of detectors, drift, calibration, depth of probe, hydrostatic, or baseline noise of analytical/electrical system.

82.   (New) The method of claim 55, wherein step a) is performed by a licensed client and wherein the first entity is a licensor and the second entity is a licensed operator.